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SEVENTH FLOOR			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

	A 11 41 A1	A .11				
	Application No.	Applicant(s)				
Office Action Summany	09/990,831	KNIGHTON ET AL.				
Office Action Summary	Examiner	Art Unit				
	Anthony J. Daniels	2615				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.1: after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period of - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim will apply and will expire SIX (6) MONTHS from the cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on <u>08 N</u>	ovember 2005					
	action is non-final.					
·=	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims	,					
4)⊠ Claim(s) <u>1-51,54-59 and 71-73</u> is/are pending in the application.						
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6) Claim(s) 1-51,54-59 and 71-73 is/are rejected.						
7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/o	r cleation requirement					
o) Claim(s) are subject to restriction and/o	r election requirement.					
Application Papers						
9) ☐ The specification is objected to by the Examine	r.					
10)⊠ The drawing(s) filed on <u>08 November 2005</u> is/are: a)⊠ accepted or b)☐ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correct	ion is required if the drawing(s) is obj	ected to. See 37 CFR 1.121(d).				
11)☐ The oath or declaration is objected to by the Ex	raminer. Note the attached Office	Action or form PTO-152.				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the prior		ed in this National Stage				
application from the International Bureau	· · · · · · · · · · · · · · · · · · ·					
* See the attached detailed Office action for a list	of the certified copies not receive	d.				
Attachment(s)						
Notice of References Cited (PTO-892)	4) Interview Summary					
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	Paper No(s)/Mail Da					
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5) Notice of Informal Patent Application (PTO-152) Other:						

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DETAILED ACTION

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Response to Amendment

1. The amendment, filed 11/08/2005, has been entered and made of record. Claims 1-51,54-

59,71-73 are pending in the application.

2. Applicant's amendments to the drawings and claims 29 and 41 have overcome

examiner's objections. Examiner's objection to the specification has been withdrawn.

Response to Arguments

3. Applicant's arguments, see p. 18, paragraph 2, filed 11/8/2005, with respect to the

rejection(s) of claim(s) 1,23-26,28,47-50,55-59 under Himmele have been fully considered and

are persuasive. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made in view of Rallsion et al.

4. Applicant's arguments, see p.15, paragraph 1, filed 11/8/2005, with respect to the

rejection(s) of claim(s) 21 under Ohmura have been fully considered and are persuasive. A new

ground has been taken but with the Ohmura reference.

5. Applicant's arguments filed 11/8/2005 have been fully considered but they are not

persuasive. The examiner has broken down the arguments as follows.

A. (Ohmura) Whether the "mounting tools" of Ohmura can be classified as a grip (p. 13, para. 4)

As can be seen from the new interpretation of the grip in claim 1 as being rejected under Ohmura, a hand can grip the "mounting tools". Applicant admits that a grip can be defined as "...an object...designed to be grasped..." Surely, there is no disputing that a hand can grasp the "mounting tools" of Ohmura. Furthermore, the mounting tools can be viewed as grip in that the ears grasp the mounting tools. Finally, simply claiming a grip does not necessarily mean that the grip be utilized during operation.

B. (Ohmura) Whether the binocular display can rotate to a plurality of angular positions during use (p. 14, para. 1).

Examiner again refers to Figure 27, where in plain view, a hinge (not numbered), for the left and right mounting tool, provides for different angular positions for said mounting tools. In further support of this, the right mounting tool is slightly moved inward toward the display assembly, and the left mounting tool is perpendicular to the display assembly. The examiner has proved, by disclosure of Ohmura, a plurality of angular positions of the mounting tools.

Furthermore, the different angular positions of the mounting tools do not in anyway disable the device for its intended use. Considering an ordinary pair of glasses, it is nonsensical to think the mounting tools for ordinary glasses must be in a single set position in order to be worn. By adjusting the mounting tools, many people can wear a single set of glasses. Although, the change in angular position is not a dramatic change, it is nonetheless a change which proves a plurality of angular positions exists for use.

C. (Ohmura) The overlapping of volume of the grip and display assembly (p. 14, para.

2, p. 15, Lines 1-8).

The overlapping, as interpreted by the examiner, is viewing the apparatus from a certain

viewpoint. If the apparatus were viewed into lenses of the apparatus of Figure 27 from about 5

feet away and the mounting tools are rotated inward to the deployed orientation, the mounting

tools overlap with the display assembly as seen from the viewer. Furthermore, if viewed from

this position the viewer cannot see the portion of the display assembly covered by the mounting

tools.

D. (Blazek) Whether a stowed orientation is shown in the reference (p. 17, para. 2)

The examiner respectfully submits that in Col. 6, Lines 18-25 Blazek discloses that the

hand-grasp can adjust between the brackets to accommodate different persons. The tightening of

the allen bolt is conducted when the person has found a comfortable position after adjusting. The

adjusting moves the hand grasp counterclockwise via the allen bolt, thereby suggesting that the

hand grasp can be moved to the stowed orientation as interpreted by examiner.

E. (Blazek), Whether a hand holding the grip laterally displaced from the frontal face

of a user is inherently found in the reference (p. 17, para. 3)

The examiner is of the opinion that it is. In support of this, examiner refers applicant to

Figure 3, wherein in plain view, the hand holding the grip is laterally displaced from the frontal

face of the user.

F. (Bronson) Whether that the telescoping adjusting of the apparatus of the reference can be considered a lateral displacement (p. 18, para. 4, p. 19, Lines 1-5)

As noted by applicant, the telescoping adjusting in Bronson is a displacement, but applicant argues that it is a vertical displacement and not a lateral displacement. The examiner is of the opinion that a vertical displacement is a lateral displacement if viewed from a certain point.

G. (Bronson) Whether a sensor to detect a relative position/orientation of the image sensing array is in inherent in the reference (p. 19, para. 1)

To support the suggestion of inherency, the examiner notes that the image sensing array is not accessible to the user, thereby suggesting that a rotation means of some sort is included in the apparatus. The rotation means has to know which direction to rotate the apparatus when portrait or landscape is selected. If the apparatus is in portrait mode and landscape is desired, it follows that the rotation means must know or <u>have a sense</u> of the current position to bring it to the desired position.

H. Whether an acute angle between the grip and operator is disclosed in the reference (p. 19, para. 2, p. 20, Lines 1-14)

It seems applicant has again put the intention of the specification in the claims when making an argument. The claim simply states that the angle is defined as away from a body of the operator. This "body" could mean any part of a human body. Furthermore, the intended

position of a body of an operator cannot be covered in the scope of this claim, because applicant cannot define what is an acceptable definition of comfort when it varies from person to person.

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(Havey) Whether a mouse provides an absolute mapping

The examiner is of the opinion that a mouse does in certain respects provide an absolute mapping. A mouse on a screen is moved in real time with a mouse on a desktop. Such an attribute of a mouse is undisputed by those who have used one. Therefore, in the temporal domain, there exists an absolute mapping.

(Shibata) Whether the apparatus of Shibata can be characterized as "a display integrated into a camera (p. 21, para. 2)

The examiner has in the office action interpreted the teleconference equipment as a camera, because among other things, this piece of equipment performs the function of a camera. Furthermore, if the display where taken away, the apparatus would still be a camera with a base and ringer speaker behind a window, and putting a display into this system would without question be integrated as seen in Figure 15.

K. (Bronson) Whether the grip and display assembly of Bronson rotate to a plurality of positions relative to each other (p. 22, para. 3)

The examiner cites Col. 3, Lines 27-29, where the lens assembly (display assembly as interpreted by examiner) can be bent in any direction that the user desires. While holding the grip, the lens assembly is bent relative to the grip. Conversely, the lens assembly can be held still and the grip bent relative to the lens assembly. This is all possible due to the flexibility of the telescoping device of Bronson.

L. (Bronson) Whether the flash is of a sufficient distance away from the lens to reduce illumination error (p. 23, para. 1, p. 24, Lines 1,2)

The examiner apologizes for accidentally misleading applicant in claim 11. Bronson teaches the fill-in flash "150". This has been corrected in the office action. In Bronson, the fill-in flash is of a certain distance away from the lens. Therefore, some illumination error has been avoided or reduced. To explain, the closer the flash is to the lens, the higher the illumination error for the apparatus. Therefore, placing the fill-in flash away from the lens reduces some illumination error.

M. Official Notice of claims 21 and 57

A reference has been included to support examiner's official notice (Obitsu, US 20020023236).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4,21,22,28,29,40 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohmura et al. (US 20040130645).

As to claim 1, Ohmura et al. teaches an apparatus comprising: a grip (Fig. 27, mounting tools "231"; {The mounting tools "231" grip the users ears in operation. Also, the left and right hands can grip the mounting tools simultaneously.}); and a binocular digital display assembly (Figure 27, apparatus '200F"; eyepiece windows "203a" and "203b"; LCD units "210a" and "210b") coupled to the grip (Figure 27; mounting tools "231" attached to apparatus '200F") and rotatable about the grip between a plurality of angular positions (Figure 27; hinge (not numbered) attaching the mounting tools "231" to the apparatus "200F"; {The operation of the hinge can be interpreted in two ways. First, the mounting tools "231" rotate about the apparatus "200F" while the apparatus "200F" is held still. Second, the apparatus "200F" rotates about the mounting tools "231" are held still.}), which can be maintained during use (It is inherent that the apparatus can be rotated about the grip to different positions that can be used for someone with a smaller head or someone with a larger head.).

As to claim 2, Ohmura et al. teaches the apparatus of Claim 1 wherein the binocular display assembly comprises: a first lens (Figure 27, magnifying lens "211a"); a first display element (Figure 27, LCD unit "210a") disposed to be a focal distance from the first lens (It is inherent that the lens is a focal distance away from the LCD unit, otherwise due to the stationary position of the LCD and lens, this would leave the invention unfit for its purposes.) when the display assembly is in a deployed orientation (Examiner interprets deployed orientation as an orientation when the apparatus "200F" is at any angle between 45° and 90° with respect to the

axis defined by the right or left mounting tool "231".); a second lens (Figure 27, magnifying lens "211b"); a second display element (Figure 27, LCD unit "210b") disposed to be a focal distance from the first lens (It is inherent that the lens is a focal distance away from the LCD unit, otherwise due to the stationary position of the LCD and lens, this would leave the invention unfit for its purposes.) when the display assembly is in a deployed orientation (Figure 27; {Examiner interprets deployed orientation as an orientation when the apparatus "200F" is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool "231".}).

As to claim 3, Ohmura et al. teaches the apparatus of Claim 2 wherein the display elements are one of liquid crystal displays (LCD), organic light emitting diode (OLED) displays, Liquid Crystal On Silicon (LCOS) displays, electroluminescent (EL) displays, and retinal scan lasers ([0369], Lines 7-11).

As to claim 4, Ohmura et al. teaches the apparatus of Claim 1 wherein the display assembly has a stowed orientation (Figure 27; {Examiner interprets stowed orientation as an orientation when the apparatus "200F" is at any angle between 0° and 45° with respect to the axis defined by the right or left mounting tool "231".}) and a deployed orientation (Figure 27; {Examiner interprets deployed orientation as an orientation when the apparatus "200F" is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool "231".}) and wherein when in the stowed orientation, at least 25 % of a deployed volume of the display assembly overlaps with a volume of the grip (Figure 27; {In stowed orientation (as interpreted by examiner), the apparatus "200F" would overlap with at least 50% of either the right or left mounting tool. The only portion that would not overlap would be the piece of the

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mounting tool that goes behind the ear of the user, which only accounts for at most 30% of the volume of the mounting tool.}).

As to claim 21, Ohmura et al. teaches the apparatus of Claim 1 wherein at least a first position is suitable for right-handed use and at least a second position is suitable for left-handed use (It is inherent in the system of Ohmura et al. that the user's right or left hand could hold either the right or left mounting tools.).

As to claim 22, Ohmura et al. teaches the apparatus of Claim 1 wherein in the deployed orientation, the grip may pivot to at least one self maintaining position on an axis orthogonal to an axis of rotation of the display assembly (Figure 27; {Either the right or left mounting tool could pivot on the axis containing the length of the mounting tool which is perpendicular to the vertical axis that cuts through the hinge (not numbered).}).

As to claim 28, Ohmura et al. teaches an apparatus (Figure 27) comprising: a grip (Figure 27, mounting tools "231") having a stowed orientation (Figure 27; {Examiner interprets stowed orientation as an orientation when the mounting tools "231" are at any angle between 0° and 45° with respect to the axis containing the eyepiece windows "203a" and "203b".}) and a deployed orientation (Figure 27; {Examiner interprets deployed orientation as an orientation when the mounting tools "231" are at any angle between 45° and 90° with respect to the containing the eyepiece windows "203a" and "203b".}); and a digital display assembly (Figure 27, apparatus "200F") having a stowed orientation (Figure 27; {Examiner interprets stowed orientation as an orientation when the apparatus "200F" is at any angle between 0° and 45° with respect to the axis defined by the right or left mounting tool "231".}) and a deployed orientation (Figure 27; {Examiner interprets deployed orientation as an orientation when the

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apparatus "200F" is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool "231".}), such that, in the deployed orientation, the display is laterally displaced relative to the grip (Figure 27; {Mounting tool "231" is in deployed orientation and the apparatus "200F" (which contains the display) is laterally displaced from it.}) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (It is inherent that a hand holding the grip is laterally displaced from the frontal face of a head of the user.).

As to claim 29, Ohmura et al. teaches the apparatus of claim 28 wherein in the stowed orientation at least 25% of a deployed volume of the display assembly overlaps with a volume of the grip (Figure 27; {In stowed orientation (as interpreted by examiner), the apparatus "200F" would overlap with at least 50% of either the right or left mounting tool. The only portion that would not overlap would be the piece of the mounting tool that goes behind the ear of the user, which only accounts for at most 30% of the volume of the mounting tool.}).

As to claim 40, Ohmura et al. teaches the apparatus of Claim 28 wherein in the deployed orientation, the grip may pivot to at least one self maintaining position on an axis orthogonal to an axis of rotation of the display assembly (Figure 27; {Either the right or left mounting tool could pivot on the axis containing the length of the mounting tool which is perpendicular to the vertical axis that cuts through the hinge (not numbered).}).

6. Claims 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Blazek et al. (US # 4,864,425).

As to claim 28, Blazek et al. teaches an apparatus (Figure 6A) comprising: a grip (Figure 6A, hand-grip "37") having a stowed orientation (Figure 6A; {Examiner interprets stowed orientation as an orientation where the hand-grip "37" is disposed within the brackets via the loosening of Allen bolt "38" and adjusting the hand-grip "37" (Col. 6, Lines 18-31).}) and a deployed orientation (Figure 6A; {The position seen in Figure 6A is the deployed orientation.}); and a digital display assembly (Figure 6A, body containing LCD "302") having a stowed orientation (Figure 6A; {Examiner interprets stowed orientation as when the hang-grip "37" is held still and the body containing the LCD is rotated to where the hand-grip is disposed within the brackets.}) and a deployed orientation (Figure 6A; {The position seen in Figure 6A is the deployed orientation.), such that, in the deployed orientation (Figure 6A; {The position seen in Figure 6A is the deployed orientation. \(\), the display is laterally displaced relative to the grip (Figure 6A; {The body containing the LCD is in deployed position and is laterally displaced from the hand-grip "37".}) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (It is inherent that a hand holding the grip is laterally displaced from the frontal face of a head of the user.).

7. Claims 1,23-26,28,47-50,55-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Rallison et al. (US # 6,160,666)

As to claim 1, Rallsion et al. teaches an apparatus comprising: a grip (Figure 1, strap "16" and temple pieces "14 a and b"; {User's head grips strap "16" and temple pieces "14 a and b".}); and a binocular digital display assembly (Figure 8, image generator (LCD) "74" and parts of display system not including the strap and temple pieces; Col. 5, Lines 41-46) coupled to the

grip (Figures 1 and 8) and rotatable about the grip between a plurality of angular positions, which can be maintained during use (Col. 5, Lines 8-17).

As to claim 23, Rallison et al. teaches the apparatus of Claim 1 further comprises: a visor coupled to the housing (Figures 1 and 15; {Examiner interprets visor as main portion "12" with shield "302" and forehead brace "22".}) and to rest upon a forehead of the user when held by a user for use (Figure 15), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 2 brace "22"; Figure 15, length of shield "22"), the visor pivots coupled to the display assembly to pivot between an open and a closed position (Col. 5, Lines 8-17; {Examiner interprets closed position where the visor, as interpreted by examiner, is pivoted above user's eyes via the left and right strap pivots "17a and 17b". Open position is a position as seen in Figure 15.}).

As to claim 24, Rallison et al. teaches the apparatus of Claim 23 wherein pivoting the visor to the open position activates the display (Figure 15; {Activated display is interpreted as being able to be viewed (used for intended purpose). In Figure 15, the open position is as seen.}).

As to claim 25, Rallison et al. teaches the apparatus of Claim 23 wherein when the visor is in the closed position, the display is in an inactive state (Col. 5, Lines 8-17; {Closed position is visor and entire housing pivoted upward so LCD cannot be seen.}).

As to claim 26, Rallison et al. teaches the apparatus of Claim 23 wherein the visor protects a lens of the display assembly when in the closed position (Col. 10, Lines 49-54; {Shield protects in all positions.}).

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As to claim 28, Rallison et al. teaches an apparatus (Figure 1) comprising: a grip (Figure 1, strap "16" and temple pieces "14 a and b"; {User's head grips the strap "16" and temple pieces "14 a and b".}) having a stowed orientation and a deployed orientation (Col. 5, Lines 14-17, "...compact configuration..." and Figure 1 as seen in deployed); and a digital display assembly (Figure 1 and Figure 15, main portion "12" with LCD generator "74") having a stowed orientation and a deployed orientation (Col. 5, Lines 1-4; lateral adjustment provides for both orientations, such that, in the deployed orientation, the display is laterally displaced relative to the grip in all positions.}) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user.}).

As to claim 47, Rallison et al. teaches the apparatus of Claim 28 further comprises: a visor (Figures 1 and 15; {Examiner interprets visor as shield "302" and forehead brace "22".}) coupled to the housing (Figures 1 and 15) and to rest upon a forehead of the user when held by a user for use (Figure 15), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1), the visor pivots coupled to the display assembly to pivot between an open and a closed position (Col. 5, Lines 8-17; {Examiner interprets closed position where the visor, as interpreted by examiner, is pivoted above user's eyes via the left and right strap pivots "17a and 17b". Open position is a position as seen in Figure 15. As the main portion pivots, the shield pivots as well.}).

As to claim 48, Rallison et al. teaches the apparatus of Claim 47 wherein pivoting the visor to the open position activates the display (Figure 15; {Activated display is interpreted as

being able to be viewed (used for intended purpose). In Figure 15, the open position is as seen. \{\}).

As to claim 49, Rallison et al. teaches the apparatus of Claim 47 wherein when the visor is in the closed position, the display is in an inactive state (Col. 5, Lines 8-17; {Closed position is visor and entire housing pivoted upward so LCD cannot be seen.}).

As to claim **50**, Rallison et al. teaches the apparatus of Claim 47 wherein the visor protects a lens of the display assembly when in the closed position (Col. 10, Lines 49-54; {Shield protects in all positions.}).

As to claim **55**, Rallison et al. teaches a handheld apparatus (Figure 1, {The apparatus in Figure 1 is able to be held by a hand.}) comprising: a housing (Figure 1, main portion "12") defining a first opening (Figure 1, opening on other side of the left lens "2" which the user's eyes look through); a digital display disposed within the housing (Col. 2, Lines 3-8; Figure 15, image generator LCD "74"); a first lens disposed to be between a first eye of a user and the display when in use (Col. 2, Lines 58-67; Col. 3, Lines 1-4); and a visor (Figures 1 and 15; {Examiner interprets visor as shield "302" and forehead brace "22".}) coupled to the housing (Figures 1 and 15) and to rest upon a forehead of the user when held by a user for use (Figure 15), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1).

As to claim **56**, Rallison et al. teaches the apparatus of Claim 55 further comprising: a second lens disposed to be between a second eye of the user and the display when in use such that a binocular view is presented to the eyes of the user (Col. 2, Lines 58-67; Col. 3, Lines 1-4).

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As to claim 57, Rallison et al. teaches the apparatus of Claim 55 wherein the visor is pivotally coupled to the housing to pivot between an open position and a closed position (Col. 10, Lines 49-54)

As to claim 58, Rallison et al. teaches the apparatus of Claim 55 wherein the cross-dimension is adjustable within a range (Col. 5, Lines 1-4; {The lateral displacement of the strap laterally displaces cross dimension of the brace "22" with respect to the strap.}).

As to claim **59**, Rallison et al. teaches the apparatus of Claim 55 wherein the visor is coupled to the housing so as to block some ambient light from the eye of the user when the apparatus is in use (Col. 10, Lines 44-49, "...converted from see-through...").

8. Claims 28,31,34,35,41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Bronson (US # 6,384,863).

As to claim 28, Bronson teaches an apparatus (Figure 1A) comprising: a grip (Figure 1A, hand grip "100") having a stowed orientation (Figure 1A) and a deployed orientation (Figure 1B; {In a frame of reference of someone who is moving up with the digital camera (Col. 3, Lines 21-26) and looking down at the hand grip, it would seem as if the hand grip is moving down to a deployed orientation.}); and a digital display assembly having a stowed orientation (Figure 1A) and a deployed orientation (Figure 1B), such that, in the deployed orientation, the display (Col. 3, Lines 58-61, "...microdisplay viewfinder...") is laterally displaced relative to the grip (Figure 1B) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (Figure 1B; Col. 4, Lines 52-60).

As to claim 31, Bronson teaches the apparatus of Claim 28 further comprising: a sensor to detect relative rotation of the display assembly (Col. 3, Lines 62-65; {The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}) and to signal the display to adjust an image on the display to maintain a consistent orientation of an image displayed (The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.).

As to claim 34, Bronson teaches the apparatus of Claim 28 further comprising: a lens assembly coupled to the grip (Figure 1A, lens "120"); and an image-sensing array (ISA) optically coupled to the lens assembly (Col. 3, Lines 62-65, "...image array..."; {It is inherent that the image array is optically coupled to the lens "120".}).

As to claim 35, Bronson teaches the apparatus of Claim 34 further comprising: a sensor to detect a position of the display assembly relative to the ISA (Col. 3, Lines 62-65; {The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}) and cause an adjustment to an image displayed on the display assembly based on the position to maintain a consistent orientation of a target on the display (The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.).

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As to claim 41, Bronson teaches the apparatus of Claim 31 wherein in the deployed orientation, the grip defines a first acute angle away from a body of an operator to permit comfort and reduce stress on the hand and arm (It is inherent that the body of an operator could be at a position to where, measured from the body of the operator, the grip is an acute angle away.).

As to claim 42, Bronson teaches the apparatus of Claim 41 wherein any actuation of the trigger causes a capture (Col. 2, Lines 18,19, "...shutter trigger...").

As to claim 43, Bronson teaches the apparatus of Claim 28 wherein the pointer button (Col. 3, Lines 55-58, "...select button...") resides within a region (Figure 1A, hand grip "100" is the region) and wherein a position of the pointer button within the region is absolutely mapped to the display (*The depressing of select button (position) provides an instruction on the microdisplay viewfinder to the camera.*).

As to claim 44, Bronson teaches the apparatus of Claim 28 wherein the trigger and the pointer button provide access to substantially all user controls without the need for other buttons (Col. 3, Lines 55-58).

9. Claim 54 is rejected under 35 U.S.C. 102(e) as being anticipated by Havey et al. (US # 6,597,346).

As to claim **54**, Havey et al. teaches an apparatus (Figure 8) comprising: a binocular display assembly (Figure 8; Col. 8, Lines 25-44); an execute input interface (Col. 7, Lines 31-39); and a pointer interface (Figure 1, user input device "30") providing absolute mapping between a pointer button and a display of the display assembly (Col. 7, Lines 31-39) wherein

substantially all functions of the apparatus can be accessed using only the pointer interface and the execute input interface (Col. 5, Lines 17-20).

10. Claims 71-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Shibata et al. (US # 6,249,309).

As to claim 71, Shibata et al. teaches an apparatus (Figure 15) comprising: a camera (Figure 15; Col. 14, Lines 45-56; {Examiner refers to camera as the camera and monitor "2102"); a display integrated into the camera (Col. 14, Lines 45-56), the display having a first region to display first image at a full display resolution (Figure 4a, received still picture); and a second region to simultaneously display a second image at substantially reduced resolution (Figure 4a, received motion picture).

As to claim 72, Shibata et al. teaches the apparatus of Claim 71 wherein the second region is an inset within the first region (Figure 4a).

As to claim 73, Shibata et al. teaches the apparatus of Claim 71 wherein the first image and the second image may be toggled between a current view of the camera and a previously captured image (Figure 4a and Figure 4b; {Examiner refers to current view of the camera as the received still picture, and the previously captured image as the received motion picture.}).

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 11. Claim 1,4,7,8,10-15,17,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (US # 5,581,399) in view of Bronson (US # 6,384,863).

As to claim 1, Abe teaches an apparatus (Figure 1) comprising: a grip (Figure 1, left and right sides of the binocular display); and a binocular digital display assembly (Figure 1, LCDs "34L" and "34R") coupled to a grip (Figure 1). The claim differs from Abe in that it requires the digital display assembly is rotatable about a grip between a plurality of angular positions, which can be maintained during use.

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In the same field of endeavor, Bronson teaches a digital display assembly (Figure 1A, lens assembly "200") that is rotatable about a grip (Figure 1A, hand grip "100"; Col. 3, Lines 27-35). In light of the teaching of Bronson, it would have been obvious to one ordinary skill in the art to include the display assembly of Abe on the telescoping device "160" and connected to the grip "100" of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the user to elevate the binocular display to eye level, be able to rotate the assembly to any direction the user desires while keeping the hand at a comfortable, natural position (see Bronson, Col. 3, Lines 21-40).

As to claim 4, Abe, as modified by Bronson, teaches the apparatus of Claim 1 wherein the display assembly has a stowed orientation and a deployed orientation (see Bronson, Figure 1A and Figure 1B), and wherein when in the stowed orientation, at least 25% of a deployed volume of the display assembly overlaps with a volume of the grip (Figure 1A).

As to claim 7, Abe, as modified by Bronson, teaches the apparatus of Claim 1 further comprising: a lens assembly (see Abe, Figure 1, lenses "31R", "31L"; "32L", "32R") coupled to the grip (Figure 1, the lenses are coupled to the binocular display assembly which is coupled to the hand grip "100" of Bronson); and an image-sensing array (ISA) optically coupled to the lens assembly (see Abe, Figure 1, image sensors "41R" and "41L").

As to claim 8, Abe, as modified by Bronson, teaches the apparatus of Claim 7. The claim differs from Abe in that it further comprises a sensor to detect a position of the display assembly relative to the ISA and cause an adjustment to an image displayed on the display assembly based on the position to maintain a consistent orientation of a target on the display.

In the same field of endeavor, Bronson teaches a sensor to detect relative rotation of the display assembly (Col. 3, Lines 62-65; {The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}) and to signal the display to adjust an image on the display to maintain a consistent orientation of an image displayed (The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include the sensor of Bronson in the processor of Abe, because an artisan of ordinary skill in the art would recognize that this would allow the user to capture very long or very tall images in one shot.

As to claim 10, Abe teaches the apparatus of Claim 7. The claim differs from Abe in that it requires that the binocular display assembly comprises a photographic light source.

In the same field of endeavor, Bronson teaches a photographic fill-in flash on its display assembly (Figure 1, fill-in flash "150"). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include a light source in the binocular display assembly of Abe, as modified by Bronson, because this would allow the image captured to be more illuminated.

As to claim 11, Abe, as modified by Bronson, teaches the apparatus of Claim 7, wherein the binocular display assembly comprises: a photographic light source (see Bronson, Figure 1, fill-in flash "150") positioned sufficiently far from the lens assembly to reduce illumination

errors (It is inherent that the fill-in flash of Bronson is of sufficient space to avoid errors and when combined with Abe, this same distance would apply.).

As to claim 12, Abe teaches the apparatus of Claim 7 further comprising: a trigger to cause a capture by the ISA (see Bronson, Figure 1, trigger button "110"), the trigger disposed on the grip to allow actuation by an index finger of a hand holding the grip (see Bronson, Col. 2, Lines 18-21).

As to claim 13, Abe, as modified by Bronson, teaches the apparatus of Claim 12 wherein any actuation of the trigger causes a capture (see Bronson, Col. 2, Lines 18,19).

As to claim 14, Abe teaches the apparatus of Claim 1 further comprising: a pointer button coupled to the grip to provide an interface for user manipulation of a pointer within the display (see Bronson, Col. 3, Lines 55-61, "...select button...").

As to claim 15, Abe, as modified by Bronson, teaches the apparatus of claim 14 wherein the pointer button is disposed to allow actuation by the thumb of a hand holding the grip (see Bronson, Col. 3, Lines 47-49).

As to claim 17, Abe, as modified by Bronson, teaches the apparatus of Claim 14 wherein the pointer button (see Bronson, Col. 3, Lines 55-58, "...select button...") resides within a region (see Bronson, Figure 1A, hand grip "100" is the region) and wherein a position of the pointer button within the region is absolutely mapped to the display (*The depressing of select button* (position) provides an instruction on the microdisplay viewfinder to the camera.).

As to claim 18, Abe, as modified by Bronson, teaches the apparatus of Claim 1 wherein the trigger and the pointer button provide access to substantially all user controls without the need for other buttons (see Bronson, Col. 3, Lines 55-58).

12. Claims 5,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (see Patent Number above) in view of Bronson (see Patent Number above) and further in view of Kawamura et al. (US # 4,326,783).

As to claim 5, Abe, as modified by Bronson, teaches the apparatus of Claim 4. The claim differs from Abe, as modified by Bronson, in that it further requires a self- powered expander which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Abe, as modified by Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

As to claim 6, Abe, as modified by Bronson, teaches the apparatus of Claim 4. The claim differs from Abe, as modified by Bronson in that it further requires a self- powered expander which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Abe, as modified by Bronson, because an artisan of ordinary skill in the art

manual adjustment.

would recognize that this would allow the system to be more automated without the use of

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (see Patent Number above).

As to claim 9, Ohmura et al. teaches the apparatus of Claim 1. The claim differs from the embodiment of Ohmura et al. in Figure 27 in that it further requires a distributed network interface coupled to the display assembly.

In the same field of endeavor, Ohmura et al. teaches a camera that comprises an antenna for transmitting and receiving images (Figure 43, antenna "325"; [0408]). In light of the teaching of Ohmura et al., it would have been obvious to one of ordinary skill in the art to include the antenna of Ohmura et al. (Figure 43) in the system of Ohmura et al. (Figure 27), because an artisan of ordinary skill in the art would recognize that this would allow for the transfer of digital images among cameras without the need for a cable that prevents portability.

14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (see Patent Number above) in view of Bronson (see Patent Number above) in view of Blazek et al. (see Patent Number above).

As to claim 16, Abe, as modified by Bronson teaches the apparatus of Claim 1. The claim differs from Abe, as modified by Bronson, in that it requires that the pointer button is only accessible when the grip is in a deployed orientation.

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In the same field of endeavor, Blazek et al. teaches an apparatus (Figure 6) in which the pointer button is only accessible when the grip is in a deployed position (Figure 6; {When the grip "37" is adjusted to be covered by the shoulder rest "27" and brackets (not shown), the buttons seen on the grip (Figure 6) are not accessible.}). In light of the teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to position the binocular display assembly of Abe where the control buttons "210" of Bronson are only accessible when the grip is in a deployed orientation, because an artisan of ordinary skill in the art would recognize that this would prevent accidental capture initiation when the user does not intend it.

15. Claims 19,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (see Patent Number above) in view of Kubo et al. (see Patent Number above).

As to claim 19, Ohmura et al. teaches the apparatus of Claim 1. The claim differs from Ohmura et al. in that it further requires a plurality of memory card slots.

In the same field of endeavor, Kubo et al. teaches a digital camera with a plurality of memory card slots that accepts memory cards (Figure 4, slots "41a" and "41b"; [0043]). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include another memory card slot in the system of Ohmura et al. (Figure 27), because an artisan of ordinary skill would recognize that items in the memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card.

Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

As to claim 45, the limitations in claim 45 can be found in claim 19. Therefore, claim 45 is analyzed and rejected as previously discussed with respect to claim 19.

16. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (see Patent Number above) in view of Bronson (see Patent Number above) and further in view of Kubo et al. (see Patent Number above).

As to claim 20, Abe, as modified by Bronson, teaches the apparatus of Claim 7. The claim differs from Abe, as modified by Bronson, in that further it further requires a plurality of memory card interfaces to permit a plurality of memory cards to be concurrently attached and electronically selected by the apparatus.

In the same field of endeavor, Kubo et al. teaches a plurality of memory card slots (Figure 5, card slots "41a" and "41b") to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include a plurality of memory card slots in the recording/playback devices "14L" and "14R" of Abe, as modified by Bronson, because an artisan of ordinary skill would recognize that items in the multiple memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

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17. Claims 27,51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rallison et al. (see Patent Number above).

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As to claim 27, Rallison et al. teaches the apparatus of Claim 24. Although Rallison et al. does not specifically teach a timer that times out after a predetermined time during which no display event occurred, the time out causing the display to deactivate, and cycling the visor activates the display. Official Notice is taken that the concept of a timer, when timed out, that deactivates a display when no event has occurred, and activates it by a new movement is well known and expected in the art. One of ordinary skill in the art would have motivated to do such, because this is an effective way to save power of the apparatus that comprises the display.

As to claim 51, the limitations in claim 51 can be found in claim 27. Therefore, claim 27 is analyzed and rejected as previously discussed with respect to claim 27.

18. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Blazek et al. (see Patent Number above).

As to claim 30, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it requires that the pointer button is only accessible when the grip is in a deployed orientation.

In the same field of endeavor, Blazek et al. teaches an apparatus (Figure 6) in which the pointer button is only accessible when the grip is in a deployed position (Figure 6; {When the grip "37" is adjusted to be covered by the shoulder rest "27", the buttons seen on the grip (Figure 6) are not accessible.}). In light of the teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to position the lens assembly of Bronson "200" where

the control buttons "210" are only accessible when the grip is in a deployed orientation, because an artisan of ordinary skill in the art would recognize that this would prevent accidental capture initiation when the user does not intend it.

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19. Claims 32,33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Kawamura et al. (US # 4,326,783).

As to claim 32, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a self- powered expander which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

As to claim 33, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a self- powered positioner which when actuated transitions the display assembly from its stowed orientation to its deployed orientation.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

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20. Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Ohmura et al. (see Patent Number above).

As to claim 36, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a distributed network interface coupled to the display assembly.

In the same field of endeavor, Ohmura et al. teaches a camera that comprises an antenna for transmitting and receiving images (Figure 43, antenna "325"; [0408]). In light of the teaching of Ohmura et al., it would have been obvious to one of ordinary skill in the art to include the antenna of Ohmura et al. in the display assembly of Bronson "200", because an artisan of ordinary skill in the art would recognize that this would allow for the transfer of digital images among cameras without the need for a cable that prevents portability.

As to claim 37, Bronson teaches the apparatus of Claim 36 further comprising: a photographic light source (see Bronson, Figure 1A, fill-in flash "150").

As to claim 38, Bronson teaches the apparatus of Claim 36 further comprising: a photographic light source (see Bronson, Figure 1A, fill-in flash "150") positioned sufficiently far from the lens assembly to reduce illumination errors (see Bronson, Figure 1A).

As to claim 39, Bronson teaches the apparatus of Claim 36 further comprising: a trigger to cause a capture by the ISA (see Bronson, Col. 2, Lines 18,19), the trigger disposed on the grip to allow actuation by an index finger of a hand holding the grip (see Bronson, Col. 2, Lines 20,21).

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21. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Ohmura et al. (see Patent Number above) in view of Kubo et al. (see Patent Number above).

As to claim 46, Bronson, as modified by Ohmura et al., teaches the apparatus of claim 36. The claim differs from Bronson, as modified by Ohmura et al., in that it further requires a plurality of memory card interfaces to permit a plurality of memory cards to be concurrently attached and electronically selected by the apparatus.

In the same field of endeavor, Kubo et al. teaches a plurality of memory card slots (Figure 5, card slots "41a" and "41b") to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include a plurality of memory card slots in the recording/playback devices "14L" and "14R" of Bronson, as modified by Ohmura et al., because an artisan of ordinary skill would recognize that items in the multiple memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Daniels whose telephone number is (571) 272-7362. The examiner can normally be reached on 8:00 A.M. - 4:30 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD 1/22/2006

> DAVID OMETZ SUPERVISORY PATENT EXAMINER